



EUROPE

A semi-transparent, red-tinted image of a child running while holding a large, patterned umbrella. The child is in motion, with one leg forward and arms slightly out. The umbrella is open and covers most of the child's body.

European strategy for
child and adolescent
health and development

Information tool



Information Tool

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Working document

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This tool was developed by the WHO Regional Office for Europe in a consultative process. Professor Michael Rigby, Professor of Health Information Strategy in the Centre for Health Planning and Management, Keele University, United Kingdom was main author.

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Introduction and Rationale

Any health policy, not least a Child and Adolescent Health Strategy, needs to be evidence-based. This requires the bringing together of two types of analytic information:

- Internal, or descriptive, information on the local situation, and
- External, or reference, information as to achievable goals.

This tool is designed for two purposes, which complement one another in the task of moving towards rational and evidence-based policy, service delivery, and monitoring in Child and Adolescent Health.

Information system review

Information is an expensive resource. Focused systems are necessary to gather the right data and turn them into relevant and timely information. The traditional collection of routine statistics needs regular review in order to ensure relevance to modern needs, including policy development; needs analysis; service targeting, delivery and monitoring; and outcome analysis. Modern technology, as appropriate for a country's level of development, can do much to capture relevant data from routine business processes. This use of the this tool will enable information staff and policy makers to review the adequacy of their current information systems, and to make any appropriate recommendations for change

Policy and service development

Only by knowing the successes, problems, resource deployment and unmet needs of their population can politicians and policy makers develop the right route forward to promote the health of their child and adolescent populations. As indicated in the strategy document, this must be a proactive and anticipatory process, addressing challenges to health before they cause damage and death. Thus the necessary information systems must monitor health and its upstream determinants and challenges, rather as an aircraft's cockpit instrument array ascertains the appropriate route, and monitors the functioning of the technology, to ensure a safe journey not the recording of an adverse event (though that is covered to as an adjunct). Policy makers should therefore use this tool to assess how much they know about their young generation's health in the widest sense, and its determinants, so to initiate appropriate action. This tool should both categorise what is known, and catalogue what should be but is not known.

This tool is closely linked to the Child and Adolescent Health Strategy, and to its partner tools in the WHO Child and Adolescent Health Toolkit. It is structured to support the life course approach promoted in the strategy, and also to address the generic priorities within it.

This document seeks to assist countries in the process of assembling and analysing the information needed to produce an objective and evidence-based strategy, based on

identified need and relative priority, and reviewing strengths and weaknesses of current data and information processes.

It comprises six sections:

1. An equitable population-based approach
2. Indicators of specific health determinants along the life course
3. Child health data from other sectors
4. Health systems availability, access, and quality
5. Health information adequacy
6. Child health policy priorities and influences

COUNTRY:

1. An equitable population-based approach

Matrix 1.1: Resident Child and Adolescent Population

Is good information available about the demographics of the child and adolescent population of the country?

Age-Groups (and sub-groups)	National Totals available?	Latest available Year	Accuracy (Estimated % accuracy)	Sex breakdown available?	Regional breakdown available?	Comments (Particularly coverage, regularity and accuracy of sources)
0-7 days inclusive	Yes / No			Yes / No	Yes / No	
8-28 days inclusive	Yes / No			Yes / No	Yes / No	
29 days -12 months inclusive	Yes / No			Yes / No	Yes / No	
Sub-total under 1 year	Yes / No			Yes / No	Yes / No	
1-4 years inclusive	Yes / No			Yes / No	Yes / No	
Total 0- 4 years	Yes / No			Yes / No	Yes / No	
				Yes / No	Yes / No	
5-9 years inclusive	Yes / No			Yes / No	Yes / No	
10-14 years inclusive	Yes / No			Yes / No	Yes / No	
15-19 years inclusive	Yes / No			Yes / No	Yes / No	
of which 15-17 years	Yes / No			Yes / No	Yes / No	
Total 0-17 years	Yes / No			Yes / No	Yes / No	
Total 0-19 years	Yes / No			Yes / No	Yes / No	

Matrix 1.2: Equity for special population groups

Is the information defined in Matrix 1.1 available for special population groups?

Special Group	National totals available by age-group?	Latest available Year	Accuracy (Estimated % accuracy)	Percentage of Child Population	Sex breakdown available?	Regional breakdown available?	Comments
Asylum seeking	Yes / No				Yes / No	Yes / No	
Immigrant within last 5 Years	Yes / No				Yes / No	Yes / No	
Illegal immigrant	Yes / No				Yes / No	Yes / No	
Refugee	Yes / No				Yes / No	Yes / No	
Homeless (refugee and indigenous)	Yes / No				Yes / No	Yes / No	
Culturally itinerant lifestyle (e.g. Roma)	Yes / No				Yes / No	Yes / No	
Orphaned	Yes / No				Yes / No	Yes / No	
Children resident in institutions *	Yes / No				Yes / No	Yes / No	
Children in care **	Yes / No				Yes / No	Yes / No	
Other groups determined nationally? ***	Yes / No				Yes / No	Yes / No	

* Includes residential children's homes, orphanages, hospital as permanent residence, prisons and other penal institutions

** Children under the supervision of statutory authorities, including children with foster parents, and with natural parents but under statutory supervision.

*** If there are any other groups counted locally (other than ethnic and socio-economic groups as per Matrix 1.3 below); if so, please give description.

Matrix 1.3: Social and ethnic groups

Is the information defined in Matrix 1.1 available by population group breakdown?

Breakdown	National totals available by age-group?	Latest available year	Accuracy (Estimated % accuracy)	Percentage of child population	Sex breakdown available?	Regional breakdown available?	Comments
Socio-economic group	Yes / No				Yes / No	Yes / No	
Ethnic Group	Yes / No				Yes / No	Yes / No	

Matrix 1.4 Absolute and relative poverty

Elimination of poverty is a Millennium Development Goal, as well as an important health policy issue. Is adequate information available to prioritise and target this key issue of Absolute and Relative poverty, by the age-groups of Matrix 1.1?

Breakdown	National totals available by age-group?	Latest available year	Accuracy (Estimated % accuracy)	Percentage of child population	Sex breakdown available?	Regional breakdown available?	Breakdown by other population groups available?	Comments
Absolute poverty *	Yes / No				Yes / No	Yes / No	Yes / No	
Relative poverty **	Yes / No				Yes / No	Yes / No	Yes / No	

* Living on under US \$ 2 per day (definition used by WHO Regional Office for Europe in 2001 – see www.euro.who.int/mediacentre/PressBackgrounders/2001/20011002_4).

** Household income below 50% of the national median (UNICEF definition, 2005).

2. Indicators of specific health determinants along the life course

Matrix 2.1 The first year of life

Health Topic	National data available?	If not, what is principal impediment to compilation	Sex breakdown available?	Regional breakdown available?	Population group breakdowns available?	Comments
Rates of mother-child HIV transmission	Yes / No		Yes / No	Yes / No	Yes / No	
% of mothers who smoked during the pregnancy	Yes / No		Yes / No	Yes / No	Yes / No	
in infant's first year of life	Yes / No		Yes / No	Yes / No	Yes / No	
% children exclusively breastfed at hospital discharge or immediately after birth (home births)	Yes / No		Yes / No	Yes / No	Yes / No	
% children exclusively breastfed at 6 months	Yes / No		Yes / No	Yes / No	Yes / No	
% children receiving breastfeeding at 12 months	Yes / No		Yes / No	Yes / No	Yes / No	

Matrix 2.2 Early childhood (prior to school entry)

Health Topic	National data available?	If not, what is principal impediment to compilation	Sex breakdown available?	Regional breakdown available?	Population group breakdowns available?	Comments
% of Children 0-4 years inclusive exposed to household environmental tobacco smoke	Yes / No		Yes / No	Yes / No	Yes / No	
Childhood immunisation rates – measles (MCV1)	Yes / No		Yes / No	Yes / No	Yes / No	
Childhood immunisation rates – tetanus	Yes / No		Yes / No	Yes / No	Yes / No	
Children overweight at school entry	Yes / No		Yes / No	Yes / No	Yes / No	

Matrix 2.3 Late childhood

Health Topic	National data available?	If not, what is principal impediment to compilation	Sex breakdown available?	Regional breakdown available?	Population group breakdowns available?	Comments
Dental morbidity – dmft* index for 5 year old children	Yes / No		Yes / No	Yes / No	Yes / No	
Dental morbidity – dmft* index for 10 year old children	Yes / No		Yes / No	Yes / No	Yes / No	
Early school leavers % leaving (voluntarily or by exclusion) during compulsory school age.	Yes / No		Yes / No	Yes / No	Yes / No	

* Standard definition of decayed, missing, filled (deciduous) teeth

Matrix 2.4 Adolescence

Health Topic	National data available?	If not, what is principal impediment to compilation	Sex breakdown available?	Regional breakdown available?	Population group breakdowns available?	Comments
Alcohol abuse – % of 15 year old children reporting having been drunk from alcohol on ≥ 2 occasions	Yes / No		Yes / No	Yes / No	Yes / No	
Substance misuse - % of 15 year old children reporting regular use of cannabis, or ever using heroin or ecstasy	Yes / No		Yes / No	Yes / No	Yes / No	

Matrix 2.5 Throughout the childhood life course

Some health outcomes occur at all childhood ages. Are indicators compiled so as to be able to identify key issues?

Health Topic	National data available?	If not, what is principal impediment to compilation	Sex breakdown available?	Regional breakdown available?	Population group breakdowns available?	Comments
Cancer incidence	Yes / No		Yes / No	Yes / No	Yes / No	
Diabetes incidence	Yes / No		Yes / No	Yes / No	Yes / No	
Asthma prevalence	Yes / No		Yes / No	Yes / No	Yes / No	
Measles incidence	Yes / No		Yes / No	Yes / No	Yes / No	
Burns	Yes / No		Yes / No	Yes / No	Yes / No	
Poisoning	Yes / No		Yes / No	Yes / No	Yes / No	
Fractures of the longbone	Yes / No		Yes / No	Yes / No	Yes / No	
Suicide	Yes / No		Yes / No	Yes / No	Yes / No	
Attempted suicide	Yes / No		Yes / No	Yes / No	Yes / No	

Matrix 2.6 Special child and adolescent health issues

For a number of key child health issues, measurement methods have not yet been standardised sufficiently to support the definition of an international indicator, yet local measurement of need is fundamentally important. Does your country have sound means of measuring to following topics?

Health Topic	National data collection and need assessment	If not Good, what is principal impediment to compilation	Sex breakdown available?	Regional breakdown available?	Population group breakdowns available?	Comments
Intentional injury / abuse of children	Inadequate / Acceptable / Good		Yes / No	Yes / No	Yes / No	
Handicap and disability	Inadequate / Acceptable / Good		Yes / No	Yes / No	Yes / No	
Incidence of learning disorders / intellectual disability	Inadequate / Acceptable / Good		Yes / No	Yes / No	Yes / No	
Health-related educational needs	Inadequate / Acceptable / Good		Yes / No	Yes / No	Yes / No	
Childhood behaviour disorders	Inadequate / Acceptable / Good		Yes / No	Yes / No	Yes / No	
Child mental health	Inadequate / Acceptable / Good		Yes / No	Yes / No	Yes / No	
Pregnancy of girls under 16 years	Inadequate / Acceptable / Good		Yes / No	Yes / No	Yes / No	
Unplanned pregnancy of girls aged 16 – 17	Inadequate / Acceptable / Good		Yes / No	Yes / No	Yes / No	

Matrix 2.7 Mortality

Whilst tackling adverse determinants of health should be the strategic priority, child mortality is an important measure of key issues, and of progress made.

Mortality measure	National data available?	If not, what is principal impediment to compilation	Sex breakdown available?	Regional breakdown available?	Population group breakdowns available?	Comments
Perinatal mortality rate	Yes / No		Yes / No	Yes / No	Yes / No	
Neonatal mortality rate	Yes / No		Yes / No	Yes / No	Yes / No	
Infant mortality rate (under 1 year)	Yes / No		Yes / No	Yes / No	Yes / No	
Under 5 mortality rate (0-4 inclusive)	Yes / No		Yes / No	Yes / No	Yes / No	
Total under 20 mortality rate	Yes / No		Yes / No	Yes / No	Yes / No	
Mortality rates for infectious diseases	Yes / No		Yes / No	Yes / No	Yes / No	
Mortality rates for congenital malformations	Yes / No		Yes / No	Yes / No	Yes / No	
Mortality rates for malignant neoplasms (cancers)	Yes / No		Yes / No	Yes / No	Yes / No	
Mortality rates for burns	Yes / No		Yes / No	Yes / No	Yes / No	

Mortality rates for poisoning	Yes / No		Yes / No	Yes / No	Yes / No	
Mortality rates for transport accidents	Yes / No		Yes / No	Yes / No	Yes / No	
Mortality rates for drowning	Yes / No		Yes / No	Yes / No	Yes / No	
Mortality rates for suicide	Yes / No		Yes / No	Yes / No	Yes / No	
Mortality rates for assault and homicide	Yes / No		Yes / No	Yes / No	Yes / No	

3. Child health data from other sectors

The health sector, and ministry of health, has responsibility for health issues, but several other sectors and ministries have an important inter-relationship with child health, and the needs of children for health-related services. In the process of compiling the Child and Adolescent Health Strategy, and more generally in the planning of health support to children, the adequacy of information from other sectors is crucial.

Matrix 3.1 Data from other sectors

Ministry / Sector	Health Issues(s)	Shared Data Availability	Sex breakdown available?	Regional breakdown available?	Population Group breakdowns Available?	Comments
Immigration	Health of child immigrants	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
Planning	Anticipated major relocations of population	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Overall changes to demography	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Likely changes to workforce availability	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	

Housing	Housing lacking adequate water supply and/or sanitation	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Housing not meeting national standards against damp or overcrowded dwellings	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Areas of housing shortage / overcrowding	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
Fire Department Data	Distribution of house fires	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
Environmental Health	Inadequate / polluted drinking water supplies	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Environmental pollution	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Noise pollution	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
Education	Significant School absences for health reasons	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Health issues of concern to schools	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	

	Children with special needs	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Provision of vocational education services for children (within and outside school)	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Provision and uptake of Youth services, such as sexual health counselling	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Proportion of schools categorised as health promoting schools	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
Social Welfare	Children under formal care or protection	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Children in residential institutions	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
Social/ Financial Welfare	Provision and uptake of diet and nutrition support, eg. food supplements, coupons or financial support'	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Tax benefits or allowances for children	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	

Pre-School Play/ Education	Distribution of approved provision	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Assisted attendance for children with special needs	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
Criminal Justice / Law Enforcement	Child abuse	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Other child victims of Crime	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Child offenders	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Children in penal institutions	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
	Road traffic accident data by location and cause	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	
Finance	Planning framework for future service planning	Inadequate / Acceptable / Good	Yes / No	Yes / No	Yes / No	

4. Health systems availability, access and quality

Whilst the health of children is the main focus of the Child and Adolescent Health strategy, health needs are addressed in large part by health services and systems. These need to be set in the context of a country's approach to public service provision, the economy, and other factors. Nevertheless, some information issues are important in assessing problems, or their absence, within the health system itself.

Matrix 4.1 Health systems

Topic	Adequacy of Information	Regional breakdown available?	Population group breakdowns available?	Comments
% of Children with access / eligibility for primary health care*	Inadequate / Acceptable / Good	Yes / No	Yes / No	
% of children with access / eligibility for secondary health care*	Inadequate / Acceptable / Good	Yes / No	Yes / No	
% of baby friendly hospitals	Inadequate / Acceptable / Good	Yes / No	Yes / No	
% of primary care staff with child health training	Inadequate / Acceptable / Good	Yes / No	Yes / No	
% of hospital paediatric department staff with paediatric training	Inadequate / Acceptable / Good	Yes / No	Yes / No	
% posts unfilled in primary care	Inadequate / Acceptable / Good	Yes / No	Yes / No	
% posts unfilled in secondary paediatric care	Inadequate / Acceptable / Good	Yes / No	Yes / No	

3 year trends in human resources in health	Inadequate / Acceptable / Good	Yes / No	Yes / No	
Health workforce planning	Inadequate / Acceptable / Good	Yes / No	Yes / No	
% hospitals allowing parental overnight accompaniment for children admitted	Inadequate / Acceptable / Good	Yes / No	Yes / No	
Leukaemia 5 year survival rate	Inadequate / Acceptable / Good	Yes / No	Yes / No	

* E.g. eligible for public health service, covered by statutory or other insurance provision, etc..

5. Health information adequacy

Good health information at the population level is essential for service management and development, and for the development of policies and strategies. This section invites review of current strengths and weaknesses, and action in hand.

Matrix 5.1 Health Information

Information Topic	Adequacy of Information	Action in Hand / Planned regarding information flows
Baseline resident population	Inadequate / Acceptable / Good	
Child health data from primary care	Inadequate / Acceptable / Good	
Child health data from secondary care	Inadequate / Acceptable / Good	
Inter-sectoral statistical data sharing	Inadequate / Acceptable / Good	
Health surveys regarding children – regular provision	Inadequate / Acceptable / Good	
Longitudinal studies of birth cohorts	Inadequate / Acceptable / Good	
Disease registers	Inadequate / Acceptable / Good	
Compilation of comparative indicators	Inadequate / Acceptable / Good	
Treatment outcomes compilation	Inadequate / Acceptable / Good	
Reference evidence knowledge bases	Inadequate / Acceptable / Good	
Reference policy guidelines	Inadequate / Acceptable / Good	

6. Child health policy priorities and influences

Health policies and service plans for children and child health need to be based on an amalgam of scientific information, needs assessment data, and public policy contextual information. Please give a broad indication of the relative weight of different information available to enable policy makers to determine the priorities for the country's child health strategy and policies.

Matrix 6.1 Relative priorities of need to improve internal equity

Priorities identified by analysis of within-country data.

What are the topics with greatest spread within country by geographic location?			
Topic	Location with greatest needs	Range from mean	Comment
1.			
2.			
3.			
4.			

What are the topics with greatest spread by sex?

Topic	Disadvantaged sex	Range from mean	Comment
1.			
2.			
3.			
4.			

What are the topics with greatest spread by ethnic group?

Topic	Ethnic group	Range from mean	Comment
1.			
2.			
3.			
4.			

What are the topics with greatest spread by special population group?

Topic	Special group	Range from mean	Comment
1.			
2.			
3.			
4.			

Matrix 6.2 Relative national priorities identified by benchmarking

International comparisons, or benchmarking, can show strengths, and weaknesses demanding priority action. Benchmarking sources for child and adolescent health can include the WHO Europe Health For All database, WHO Headquarters Reports, UNICEF world indicators, Health Behaviour of School Aged Children (HBSC) reports, European Home and Leisure Accident Surveillance System (EHLASS), UNICEF Innocenti Report Cards, Millennium Development Goal monitoring, specialist agencies' reports, and (intended from December 2005) the WHO Europe CHILD health indicators database for 2000. The comparators can be selected by geographic proximity, Human Development Group (HDI) similarity, health system similarity, or other rational basis.

What are the topics with greatest spread variance from comparative countries?				
Topic	Source of benchmark	Comparator basis	Range from peers	Comment
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

Matrix 6.3 Child health policy determinants

Health policies and service plans for children and child health need to be based on an amalgam of scientific information, needs assessment data, and public policy contextual information. Please give a broad indication of the relative weight of different information available to enable policy makers to determine the priorities for the country's child health strategy and policies:

Determinant	Weight
Assessed Need from Empirical Data	
Scientific Reference Knowledge	
Expert Views of Health Sector Officials	
Non-health Public Officials	
Health Insurance Bodies	
Politicians	
Religious and Ethnic Leaders	
Public, Consumer and Health Interest Groups	
Children and Adolescents' Consultative Groups	
Aid and Technical Assistance Donors	
Others (specify)	
TOTAL	100%

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